

REMARKS

Administrative Overview

Claims 1-29 were presented in the original application, which was filed on October 9, 2001. A Notice of Allowance was issued on November 27, 2002, and the issue fee was paid on February 27, 2003. However, following submission of a Third Supplemental Information Disclosure Statement by Applicants on February 21, 2003, the Notice of Allowance was withdrawn and an Office action was issued. The Office action, dated September 17, 2003, rejects claims 1-25 under 35 U.S.C. § 102(b), and allows claim 26-29.

More specifically, the pending Office action rejects claims 1-25 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 2,628,171 (Green).

Applicants cancel claims 19-25 without prejudice. Applicants amend allowed claim 29 as shown in the preceding Listing of Claims so that it does not depend from canceled claim 19. Applicants also present new claims 30-40 as shown in the preceding Listing of Claims. Support for each of the new claims may be found throughout the specification and drawings, and at least at the locations specified in the following table:

<u>Claim Number</u>	<u>Example Locations of Support in Specification and Drawings</u>
30	Pages 6-7, paragraph 28.
31	Page 10, paragraph 49; Pages 6-8, paragraphs 27-35.
32	Page 6, paragraph 27.
33	Page 10, paragraph 49; Pages 9-10, paragraphs 43-48.
34	Original claim 20; Page 9, paragraph 43.
35	Original claim 21; Page 9, paragraph 43.
36	Original claim 22; Page 10, paragraph 44.
37	Original claim 23; Page 10, paragraph 45.
38	Original claim 24; Page 10, paragraph 47.
39	Original claim 25; Page 10, paragraph 46.
40	Pages 9-10, paragraphs 43 and 44.

Applicants submit that no new matter has been added by any of these amendments or new claims. Following entry of the present Amendment, claims 1-18 and 26-40 are pending in this application.

Original Independent Claims 1 and 7 Are Each Patentable Over the Cited Art

Claim 1 stands rejected under 35 U.S.C. § 102(b) as being anticipated by Green. Applicants respectfully traverse this rejection because Green fails to teach or suggest every element of claim 1 as discussed below.

The Office action states “the composition as described in [Green] anticipates the mixture of the reaction products as disclosed in claim 1 line 2 of applicants claimed invention.” Applicants respectfully disagree for the following two reasons:

- (1) Green discloses a mixed reaction product that is different from the mixture of reaction products in claim 1. Green teaches the use of *only one* diol in producing a mixed reaction product, whereas claim 1 requires the use of *at least two* diols, thereby producing a mixture of reaction products that would differ from the mixture disclosed in Green; and
- (2) Green does not suggest a mixture “substantially free from di-functional diols other than HO-R²-OH,” as required in claim 1.

At page 3, paragraph 8, the specification states, “it is desirable for certain applications ... to employ pure macrocyclic oligoesters, i.e., macrocyclic oligoesters *substantially free from macrocyclic co-oligoesters*... Methods that lead to pure macrocyclic oligoesters are ... desired.” [emphasis added]. Paragraph 9 explains, “[i]t has been discovered that organo-titanate catalysts of the invention are useful for preparing macrocyclic oligoesters *that are substantially free from macrocyclic co-oligoesters*” [emphasis added].

At page 6, paragraph 27, the specification states the following:

In one aspect, the invention is directed to a mixture of reaction products of $x(\text{Ti}-(\text{OR}^1)_4) + y(\text{HO}-\text{R}^2-\text{OH}) + z((\text{HO})-\text{C}(\text{R}^3)(\text{R}^4)-\text{W}-\text{C}(\text{R}^5)(\text{R}^6)-(\text{OH}))$. The mixture of reaction products is *substantially free from di-functional diols other than HO-R²-OH*. That is, the mixture is substantially free from $(\text{HO})-\text{C}(\text{R}^3)(\text{R}^4)-\text{W}-\text{C}(\text{R}^5)(\text{R}^6)-(\text{OH})$. [emphasis added]

Thus, the specification discloses the use of *two* diols -- namely, “diol A”: (HO-R²-OH) and “diol B”: ((HO)-C(R³)(R⁴)-W-C(R⁵)(R⁶)-(OH)) -- to produce the mixture of reaction products of claim 1. These reaction products then can be used to prepare pure macrocyclic oligoesters that are substantially free from macrocyclic co-oligoesters, because substantially all of diol B is consumed, while only diol A may remain in the reaction mixture in a significant proportion.

On the other hand, Green teaches the use of *only one diol* in producing a mixture of reaction products. For example, at column 3, lines 51-56, Green states, “[t]he aforementioned compounds may be prepared by heating a symmetrical, lower alkyl titanium tetraester with an optional proportion of *the* selected diol, whereby a mixed reaction product is obtained” [emphasis added]. Furthermore, at column 4, lines 13-16, “[a]s illustrations of such operative,

but water-sensitive titanium esters, may be mentioned those obtained by reacting... tetra-isopropyl titanate with *one* of the following diols..." [emphasis added].

The Office action states, "[a]ny differences not specifically mentioned [in Green] appear to be conventional. Consequently, the claimed invention cannot be deemed as novel and accordingly is unpatentable." Applicants respectfully disagree.

The requirement in claim 1 that the mixture be substantially free from di-functional diols other than A above is important to the workability of the invention of claim 1, as described in the specification, for example, at page 3, paragraph 9 and at page 6, paragraph 27. Furthermore, it would not be obvious to one of ordinary skill in the art to modify the mixture disclosed in Green in a way to produce the mixture of claim 1.

One reason that it would not be obvious to one of ordinary skill in the art to modify the mixture disclosed in Green in a way to produce the mixture of claim 1 is because Green discloses a utility for its disclosed mixture that is completely different from the utility of the mixture of claim 1. At column 7, lines 46-48 of Green, the disclosed mixture is described as, "a water-repellency composition adapted to be applied to textile fiber from a hydrocarbon solvent..." This utility has no relation to the preparation of pure macrocyclic oligoesters that are substantially free from macrocyclic co-oligoesters, and it is not conventional to modify the mixture disclosed in Green in a way to produce the mixture of claim 1.

Even if it is deemed that Green renders conventional the use of more than one diol, Green, itself, teaches away from the desirability of a mixture of reaction products in which substantially all of a given species of diol has been consumed, which is required in claim 1. Green teaches that there is no preference for a mixture of reaction products in which substantially all of a given species of diol has been consumed. For example, at column 3, lines 56-61, Green states, "[m]oreover, such mixed reaction products may be used directly in this invention, that is *without regard to the degree of alkyl radical interchange which has taken place, and without separation of the reaction products into their constituents*" [emphasis added]. Green ascribes no benefit to the relative degree of alkyl radical interchange that takes place.

Therefore, because Green fails to teach or suggest every element of original claim 1, Applicants respectfully request that the rejection of original claim 1 based on 35 U.S.C. § 102(b) be reconsidered and withdrawn.

Claim 7 stands rejected under 35 U.S.C. § 102(b) as being anticipated by Green. Applicants respectfully traverse this rejection, since, as discussed herein, Green fails to teach or suggest every element of claim 7.

The Office action states "the composition as described in [Green] anticipates the mixture of the reaction products as disclosed in claim 1 line 2 of applicants claimed invention." As in the remarks regarding the rejection of original claim 1, Applicants respectfully disagree for the following two reasons, with respect to original claim 7:

- (1) Green discloses a mixed reaction product that is different from the mixture of reaction products in claim 7. Green teaches the use of *only one* diol in producing a mixed reaction product, whereas claim 1 requires the use of *at least two* diols, thereby producing a mixture of reaction products that differs from the mixture disclosed in Green; and
- (2) Green does not suggest a mixture "substantially free from di-functional diols other than HO-R²-OH," as required in claim 7.

The arguments proffered above with respect to original claim 1 apply analogously to original claim 7.

Therefore, because Green fails to teach or suggest every element of original claim 7, Applicants respectfully request that the rejection of original claim 7 based on 35 U.S.C. § 102(b) be reconsidered and withdrawn.

Original Dependent Claims 2-6 and 8-18 Are Patentable Over the Cited Art

Original dependent claims 2-6 and 8-18 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Green. Applicants respectfully traverse these rejections.

Because claims 2-6 depend from independent claim 1 and because claims 8-18 depend from independent claim 7, they each include all the limitations of their respective independent claim. As discussed above, claims 1 and 7 are patentably distinguishable over the cited art; thus claims 2-6 and 8-18 also are patentably distinguishable over the cited art.

Because Green fails to teach or suggest every element of any of claims 2-6 and 8-18, Applicants respectfully request that the rejection of claims 2-6 and 8-18 based on 35 U.S.C. § 102(b) be reconsidered and withdrawn.

Claims 19-25 Are Cancelled Without Prejudice

Claims 19-25 are cancelled without prejudice. Thus, the rejections of claims 19-25 are moot.

Allowed Claim 29 Is Rewritten in Independent Form

Original dependent claim 29 stands as allowed. Applicants amend claim 29 as a matter of form, so that claim 29 does not depend from cancelled claim 19. No new matter is added.

Conclusion


Applicants request that the Examiner reconsider the application and claims in light of the foregoing Amendment and Response. Applicants respectfully submit that in view of the amendments and remarks herein, all of claims 1-18 and 26-40 are in condition for allowance.

If the Examiner believes that it would be helpful to discuss any aspect of the application by telephone, the undersigned representative cordially invites the Examiner to call at the telephone number given below.

Date: 1-20-04
Reg. No. 53,002

Tel. No.: (617) 310-8427
Fax No.: (617) 248-7100
2711378_1

Respectfully submitted,



William R. Haulbrook, Ph.D.
Attorney for Applicants
Testa, Hurwitz, & Thibeault, LLP
125 High Street
Boston, Massachusetts 02110